



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/845,752	04/25/97	SHRIVASTAVA R	B-5500

MM21/1006
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EXAMINER	
CRANE, S	
ART UNIT	PAPER NUMBER
2811	

DATE MAILED: 10/06/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/845,752

Applicant(s)
Shrivastava et al.

Examiner
Sara W. Crane

Group Art Unit
2811



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-29 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-29 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner:

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 10-14, 17-18, 20-22, and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sung et al.

The device of Sung Figures 1A and 1B appear to show everything as claimed, except that the Sung "conductive member" that contacts a line of source regions is aligned along a column instead of a row as claimed. Examiner assumes that it would have been obvious to rotate the page of Figures 1A and 1B by 90 degrees, so that line 40' in figure 1B extends along a row. It would have been obvious because one of ordinary skill would know that device orientation does not affect device function, and because in use the device could be oriented in any way at all. With this orientation, Figure 1A shows a plurality of memory cells having regions as claimed, with insulating sidewalls 29', and with conductive member 40' making contact with the sources of the memory cells. Each source is shared by two adjacent transistors, and thus each source would be common to cells in two adjacent rows. Each device structure as claimed appears in the Sung figures. Circuits performing functions as recited in claims 25-29 would have been obvious

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because the Sung device is intended to be used as a flash memory, and the circuit functions recited would be needed to operate a flash memory.

Claims 7-9, 15-16, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1-6, 10-14, 17-18, 20-22, and 24-29 above, and further in view of Shrivastava and Juengling.

Polysilicon plugs for source contact lines would have been obvious in view of the Juengling teaching of polysilicon plugs (68 in the cover figure), in order to take advantage of the conductivity of polysilicon. Shrivastava teaches a double diffused ^{source} and silicide on polysilicon (column 4, lines 24-25). A double diffused source would have been obvious to improve erase characteristics and silicide on polysilicon would have been obvious to improve conductivity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (703) 308-4894.

The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist, whose telephone number is (703) 308-0956.



Sara W. Crane
Examiner
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